

# Virtual Gender

## Technology, consumption and identity

Edited by Eileen Green and Alison Adam

---

# Virtual Gender

---

Technology, consumption and  
identity

Edited by Eileen Green  
and Alison Adam



London and New York

First published 2001  
by Routledge  
11 New Fetter Lane, London EC4P 4EE

Simultaneously published in the USA and Canada  
by Routledge  
29 West 35th Street, New York, NY 10001

*Routledge is an imprint of the Taylor & Francis Group*

© 2001 selection and editorial matter, Eileen Green and  
Alison Adam; individual chapters, the contributors

Typeset in Galliard by The Running Head Limited, Cambridge  
Printed and bound in Great Britain by TJ International Ltd,  
Padstow, Cornwall

All rights reserved. No part of this book may be reprinted or  
reproduced or utilized in any form or by any electronic,  
mechanical, or other means, now known or hereafter  
invented, including photocopying and recording, or in any  
information storage or retrieval system, without permission in  
writing from the publishers.

*British Library Cataloguing in Publication Data*

A catalogue record for this book is available from the British  
Library

*Library of Congress Cataloging in Publication Data*

Virtual gender: technology, consumption, and identity/edited by  
Eileen Green and Alison Adam.

p. cm.

Includes bibliographical references and index.

1. Women—Effect of technological innovations on. 2. Computers  
and women. 3. Technology—Social aspects. 4. Technological  
innovations—Social aspects. I. Green, Eileen, 1947– II. Adam,  
Alison.

HQ1233.V57 2001

306.4'6—dc21 00-047056

ISBN 0-415-23314-3 (hbk)

ISBN 0-415-23315-1 (pbk)

---

# Virtual Gender

---

As yet there has been relatively little published on women's activities in relation to new digital technologies. *Virtual Gender* brings together theoretical perspectives from feminist theory, the sociology of technology and gender studies with well designed empirical studies to throw light on the impact of ICTs on contemporary social life.

A line-up of authors from around the world looks at the gender and technology issues related to leisure, pleasure and consumption, identity and self. Their research is set against a backcloth of renewed interest in citizenship and ethics and shows how these concepts are recreated in an online situation, particularly in local settings.

With chapters on subjects ranging from gender-switching online, computer games and cyberstalking to the use of the domestic telephone, this stimulating collection challenges the stereotype of woman as a passive victim of technology. It offers new ways of looking at the many dimensions in which ICTs can be said to be 'gendered' and will be a rich resource for students and teachers in this expanding field of study.

**Eileen Green** is Research Professor of Sociology and Director of the Centre for Social and Policy Research, University of Teesside. **Alison Adam** is a Senior Lecturer at the Information Systems Institute, University of Salford.

---

## Contributors

---

**Alison Adam** is a Senior Lecturer in the Information Systems Institute, at the University of Salford, UK. Her research interests include gender and information systems and computer ethics. Her book, *Artificial Knowing: Gender and the Thinking Machine*, was published by Routledge in 1998.

**Jennifer Brayton** is a doctoral candidate in the Department of Sociology at the University of New Brunswick, Canada. Her research focuses on the social aspects of ICTs. The focus of her PhD dissertation is on how people using virtual reality give meaning to their personal experiences and how these experiences shape their definitions of this technology. She is also the PAR-L technical support person for the Policy Action and Research List devoted to women-centred policy issues in Canada.

**Elaine Graham** is Samuel Ferguson Professor of Social and Pastoral Theology at the University of Manchester, UK. She is also Academic Director of the Centre for Religion, Culture and Gender, Department of Religions and Theology.

**Eileen Green** is Research Professor in Sociology and Director of the Centre for Social and Policy Research at the University of Teesside, UK, where she is grant holder (with Alison Adam) of the ESRC-funded research seminar series, Equal Opportunities On-Line. She has a long-standing research interest in interdisciplinary perspectives on gender and technology. She is co-author of *Women's Leisure, What Leisure?* (with Sandra Hebron and Diana Woodward, Macmillan, 1990) and *Gendered by Design? Information Technology and Office Systems* (with Jenny Owen and Den Pain, Taylor and Francis, 1993). Her current research interests include gendered use of ICTs in

the household and the impact of innovative health technologies on older women's health and well being.

**Nicola Green** is working on a mobile telecommunications project with the Digital World Research Centre at the University of Surrey, UK. She is interested in the intersections between bodies, technologies and cultures of all kinds.

**Maria Lohan** is a Research Fellow at the Employment Research Centre (ERC) at the Department of Sociology, Trinity College, Dublin. Her main area of research expertise is in the sociology of science and technology with special reference to ICTs and transport technologies. She has a particular interest in gender (masculinities as well as femininities) and technology.

**Krissi M. Jimroglou** is a trainer and Virtual Training Institute programme co-ordinator for a non-profit agency in Washington DC called HandsNet. She trains non-profit professionals on how to integrate the Internet effectively into their programme and policy work. Jimroglou is a graduate of the inaugural class of Georgetown University's Communication, Culture and Technology programme.

**Karen Littleton** is a Lecturer in Psychology at The Open University, UK. She has also held research posts at the Universities of Nottingham and Southampton. She has completed an ESRC personal research fellowship. Her research interests include collaborative learning and gender and IT.

**Greg Michaelson** teaches Computer Science at Heriot-Watt University near Edinburgh, UK. His research interests include the design and implementation of functional languages, parallel functional programming, and gender in information technology.

**Nelly Oudshoorn** is Professor at the Centre for Studies of Science, Technology and Society at Twente University, The Netherlands, and a Lecturer at the Department of Science and Technology Dynamics at the University of Amsterdam. Her main research interests include the mutual shaping of gender and technology, particularly medical, and information and communication technologies. She is the author of *Beyond the Natural Body: An Archeology of Sex Hormones* (Routledge 1994) and co-author of *Localizing and Globalizing Reproductive Technologies* (Ohio University Press 1999).

**Malcolm R. Parks** is Associate Professor of Speech Communication and Assistant Vice Provost for Research at the University of Washington.

**Margit Pohl** studied Computer Science and Psychology in Vienna. Currently she works at the University of Technology, Vienna. Her main areas of interest are hypertext, educational software, human computer interaction and gender studies.

**Leslie Regan Shade** is an Assistant Professor in the Department of Communication at the University of Ottawa, Canada. Her research and teaching focuses upon the social and policy issues surrounding ICTs, with a particular focus on access, gender and public interest perspectives.

**Lynne D. Roberts** is a PhD student in the School of Psychology at Curtin University of Technology, Australia.

**Els Rommes** has a degree in public administration and public policy (MA). She is a PhD student in the field of gender and information technology at the Centre for Studies of Science, Technology and Society at Twente University, The Netherlands. Her research focuses on gender aspects of the design and use of digital cities in The Netherlands.

**Anne Scott** is a Lecturer in Women's Studies at the University of Canterbury, New Zealand. She has published a number of articles on women, health and alternative medicine. Now developing an interest in gender and technology, she is studying feminist activists' use of the informational and electronic media, and is also looking at theoretical and policy issues relating to reproductive technology.

**Lesley Semmens** is a Senior Lecturer in Computing at Leeds Metropolitan University, UK. She has worked at East Leeds Women's Workshops and her previous research area was the integration of formal notations into traditional software development methods.

**Linda Stepulevage** works in the Department of Innovation Studies at the University of East London, UK. She has an educational background in the social sciences and computer science and has worked as a computing professional. Her teaching is situated within interdisciplinary degree programmes and deals with women's relationship to ICTs and with the development of technical skills, such as database design. In her current research, she is especially interested in sexuality and gender-technology relations.

**Ellen van Oost** is an Assistant Professor in the field of gender and technology at Twente University, The Netherlands. She has a degree in mathematical engineering (MSc) and wrote a sociological-historical thesis on gender processes in the emerging occupational structure of computer science. She is currently active in a nationwide research project on the history of information technology. Her present research interests also concern contemporary and future influences of ICT on societal gender relations.

**Marja Vehviläinen** is an Academy of Finland researcher in the Computer Science department at the University of Turku, Finland. She has a background in research in information systems, social sciences and women's studies and has studied gender and information technology in the context of working life, citizenship and information technology and the history of computing.

**Kate White** is the Head of Black and White Communication, Inc., a communications research company based in Ottawa, Canada. Its focus is on risk and society, health and society, and gender issues in networking. She has also been the Canadian President of UNIFEM.

**Michèle White** is a visiting faculty member in the Art History department at the University of California Santa Cruz, USA. In 1997–8 she was a visiting professor in the Visual and Media Arts department at Emerson College. She teaches new media, contemporary visual culture, and gender theory. She completed her PhD in Art History at the Graduate Centre of the City University of New York in 1999. Her dissertation, entitled 'The virtual museum', considers nineteenth- and twentieth-century museums that do not have physical walls or material objects. Her article on MOO museums, entitled 'Cabinet of curiosities: finding the viewer in a virtual museum', appeared in the Autumn 1997 issue of *Convergence: The Journal of Research into New Media Technologies*. 'Where is the Louvre?', which describes web.museums, is forthcoming from *Space and Culture – The Journal*. She has spoken about technology in conferences at Barnard College, Cornell University, UC Berkeley, Duke University, and the University of Pennsylvania.

**Lynette Willoughby** is a Senior Lecturer in Computing at Leeds Metropolitan University, UK. She has worked at East Leeds Women's Workshops and on the University WIT/Women Returners' project and was recently a partner in the EU Leonardo da Vinci Curriculum–Women–Technology project.



**Simeon J. Yates** is a Lecturer in Social Sciences at the Open University, UK. He is currently researching the impacts of new technologies and media on contemporary society. His research interests include gender and new technology, new media and television news production, language and CMC, and science in the media.

**Gillian Youngs**, an international political economist, is a Lecturer at The Centre for Mass Communication Research, University of Leicester, UK. Her publications include *International Relations in a Global Age: A Conceptual Challenge* (Cambridge: Polity Press, 1999) and the edited collection, *Political Economy, Power and the Body: Global Perspectives* (London: Macmillan, 2000). Her research interests include women and the theory and practice of the Internet and she has been a member of the UNESCO/Society for International Development of Women on the Net project since 1997.

---

# Preface

---

This edited collection arises from a special issue of the journal, *Information, Communication and Society*, and represents all the papers from that special issue plus a selection of specially commissioned chapters. These introduce debate and empirical research findings in the under-researched area of gender and information and communication technologies (ICTs). The rapid expansion of interest in ICTs in both industrial and academic circles has spawned a raft of research and writing on an exciting array of issues from virtual identities to cybercrime. Curiously, the gender dimension of these areas has received limited attention, historically often limited to discussions of women's absence from technical disciplines, their problems with office automation and their supposed 'technophobia'.

Having undertaken a variety of research and writing projects in the area for over ten years, we felt we knew the main authors in the discipline and the trajectories of current research. Having organized conferences and put together other edited collections, we knew the problems of adequately connecting empirical studies to solid theorizing and we also knew the problems of getting sufficient good material for publication in a research climate where authors often had to make their research interests in gender and ICTs secondary to what were often seen as more respectable mainstream research areas. This meant that we put out a call for papers for the special issue with some trepidation, knowing that we might well have had to trawl round our tried and trusted contacts should the response be thin.

In the event the response was overwhelming, demonstrating a wealth of theoretical and empirical work in progress across a broad range of academic disciplines where authors were able to demonstrate their confidence, not only in their empirical results but also in a range of different theoretical approaches, reflecting the high quality and inno-

vation of ongoing international work in the field. It is heartening to see research on gender and ICTs coming out of the gender ghetto and also heartening to see so many talented researchers who are relatively new to the field. If the quantity and quality of papers for the special issue took us somewhat by surprise, so too did the subject matter of the papers we were offered. Although we realized that virtuality was becoming a hot topic throughout the whole spectrum of writing on information technologies – and this was reflected in the papers we received – we were surprised that we received few offers of papers on gender and work and education, areas which had traditionally been the mainstay of research on gender and ICTs. We rationalize this as relating to the segregation of the research area of gender and technology. As gender becomes a more mainstream topic in research on work and education, and as ICTs are becoming pervasive in the workplace and in educational settings, it may well be that gender in relation to work and education is less of a focus for gender and technology. Yet at the same time access remains a central issue in research on gender and ICTs, although now access is understood less in narrow physical or geographical terms and more as a less tangible though still restrictive concept. But there are also new themes to emerge. We are now beginning to understand consumption of information technologies along a gender dimension. At the same time this recognizes that analyses of ICTs as leisure technologies can be understood in gender terms. This also suggests that our use of ICTs may connect to our sense of identity and self that may be played out in new ways online. One aspect of identity that continues to receive much interest in the political sphere is that of citizenship and there is much speculation as to the possibilities of cyber-democracy and the concomitant ethical dimension of virtual life. All these new and relatively unexplored themes are reflected in the writing in this volume.

## **Themes and chapter descriptions**

The book is structured around four main themes. Part I addresses the important issues of gendered access to ICTs and the Internet and the complex ways in which individuals' experience of such technologies are mediated by the social process of gender. Part II addresses the under-researched theme of technologies for leisure, pleasure and consumption, including five chapters which incorporate critical discussion of the use of ICTs which range from 'mundane' household items like the domestic telephone, to state of the art technologies such

as virtual reality systems. Part III focuses upon citizens in the public sphere, at work and in the community, with three chapters which raise political and ethical concerns about technology as a product of social, political and cultural negotiations between designers, policy-makers and other groups. The final three chapters continue the focus upon ethical issues, by addressing the shifting boundaries between what we perceive as 'natural', 'human' and virtual realities or subjectivities.

Historical reflexivity and the biographical narrative are employed in Chapters 1 and 4, enabling the authors to insert themselves within the social relations of technology that they conceptualize as social process. The three authors of Chapter 1 analyse the early stages of a research project on women's relationship with the Internet. Placing themselves within the process, Anne Scott, Lesley Semmens and Lynette Willoughby describe and deconstruct the political and academic story which they, as feminists from contrasting disciplines, brought to the project. Introducing three genres: 'the webbed Utopia', 'flamed into oblivion' and 'locked into locality', they argue that each genre has its own narrative logic but that all draw upon a common core of the male history and agree that while the ending is still open, it is rapidly closing in.

A more intimate narrative has been selected by Linda Stepulevage in Chapter 4 which allows her to reflect upon her acquisition of technological skills in childhood and use 'experience stories' to trace a girl's personal relationship with technology. In a most intimate and engaging manner she weaves conceptions of locally situated technological knowledge with familiar everyday practices in an effort to make visible the social relations of technology as process.

Two chapters in Part I draw upon quantitative data to explore the impact of gender upon the ways in which women and men approach and observe technology. Greg Michaelson and Margit Pohl argue controversially that email tends to disrupt and neutralize gender stereotypes found in face-to-face co-operative problem-solving among students. Their study found no statistically significant gender differences in email-mediated problem-solving in measures of message volume and of co-operation. In particular, they found that the gendered strategies that benefit men are disrupted by asynchronous communication. This emphasis upon gendered perceptions and use of ICTs is replicated in Chapter 3, where Kate White, Leslie Regan Shade and Jennifer Brayton draw upon the results of a trans-national study between New Brunswick, Canada, and Kenya in Africa. Testing the hypothesis that men and women approach and observe technology differently, they trace

the social and economic barriers to access and use of ICTs, concluding that more research needs to be done on cultural differences.

In the final chapter of Part I, Gillian Youngs explores the nature of virtual communication and its link to reconceptualizing international politics through a discussion of the author's involvement in a 'Women on the Net' project. This project raises concerns as to the processes of 'relating internationally' especially with regard to the traditional invisibility of women in international politics and the question of boundaries which have been characteristic of state-centred approaches to international relations.

Part II opens with a chapter that also stresses the importance of social and cultural perspectives. In Chapter 6 Simeon Yates and Karen Littleton engage in an interdisciplinary debate about female attitudes and experiences in the area of computer games cultures. Drawing upon data from both psychological and sociological research, the chapter examines the role of the computer and computer games in the personal and interpersonal relations of the users. A cultural studies perspective enables the authors to explore the social relationships conducted around and via the computer in particular cultural settings. While acknowledging research which charts gender differences in the use of ICTs for leisure (Green and Adam 1998), the authors argue for the importance of listening to women and girls who actively use computer games if we are to understand fully the impact of gender in the field of computer gaming.

The next two chapters in Part II begin the theme of identity and subjectivity which is further developed in the final section of the book, themes which seem to dominate many of the contemporary theoretical debates around feminism and technology. Chapter 7 by Michèle White relates the textual processes of looking and gazing at multi-user object-oriented worlds (MOOs) to feminist theories of the gaze. Many users of MOOs want to believe that character descriptions offer a view that is like the 'real' body of the user. However, the author argues that the virtual look of certain characters, penetrating into any 'space' in order to examine other characters and determine their gender, renders an empowered gaze. This chapter suggests that MOO commands perpetuate a series of limiting identity constructs and establish some preliminary ways to interrogate these identity processes, while exploring at a more general level the ways that bodies, spaces and objects are constructed online.

The theme of virtual subjects is revisited in the next chapter, which explores the ways in which virtual reality systems become embedded in

everyday life through leisure and consumption practices. Nicola Green discusses the practices of consumption which (re)produce and maintain bodily and subjective boundaries. Asking questions about the kind of new conventions of gender created in consumption relationships, she argues that immersive virtual reality technologies cannot be understood without considering the locales in which they are embedded and the social identities which they make.

The importance of understanding technologies within their 'everyday context' is a theme continued in the last two chapters, which emphasize the importance of concentrating on the meanings and perceptions of specific technologies within domestic settings. Focusing upon leisure as an everyday practice, in Chapter 9 Eileen Green explores the potential impact of ICTs upon leisure patterns within the household, suggesting the need for more research which asks questions about the extent to which differences, such as gender, affect the level and type of use of ICTs. Taking the view that technology is best understood as both a social and a technical process, the author argues that we need to know more about the ways in which 'ordinary people' appropriate 'ordinary technologies'. Technological artefacts may be marketed as 'leisure goods', but for an object or a technology to be accepted, it has to be found a space and a function within everyday arenas.

Men's perceptions of the 'mundane technologies' such as the telephone become the focus of the final chapter in this section, which analyses the diverse masculinities that become embedded in technological identities. In this chapter, Maria Lohan discusses the ways in which specific technologies become incorporated into our gender identities as men and women. Although a growing body of empirical research now exists on women's relationship to domestic technology, few investigators have explicitly focused upon men's perceptions and use of domestic technologies. Lohan argues that the apparently contradictory stance of looking at men in relation to a feminized and 'mundane' technology, such as the domestic telephone, is a useful research vehicle for examining the processes of variation and change both within genders and in gender-technology relations.

Part III explores aspects of citizenship and ethics in online gender relations. Alison Adam argues that the newly emerging discipline of computer ethics could benefit from insights into feminist theory, particularly feminist ethics, in regard to areas where there may be substantial differences in men's and women's experiences online. This is illustrated through a more extended analysis than is usually available in discussions of computer ethics by means of examples of 'cyberstalking', an

extreme form of Internet-based harassment. This points to the inadequacy of current policy documents which advocate a liberal, free-market approach to the problem rather than seeing it as an issue with a strongly gendered dimension which therefore cries out for a gender analysis.

In Chapter 12, Marja Vehviläinen introduces us to the NiceNet group in North Karelia, Finland, an online women's community and a specifically located geographical group. In a national political environment which sets great store by its citizens having equality of access to ICTs, the women demonstrate their success and confidence in using web technology, becoming technically literate and reinforcing their own sense of community, largely through everyday leisure and work practices such as producing 'canning' labels. This is set against a backdrop that conceptualizes citizenship as carrying a wide range of rights, including those of access to technology.

The next chapter moves from Finland to The Netherlands and to the virtual city in an exciting attempt to analyse the social shaping of a digital city. Drawing upon a case study of Amsterdam, Els Rommes, Ellen van Oost and Nelly Oudshoorn use the concept of 'genderscript' to examine the gender relations embedded in the design. It is argued that in adopting an informal design process, the designers unconsciously projected their own masculine-biased interests on the future users who, despite the 'access for all' intent, emerge as overwhelmingly young, male professionals.

Part IV moves more explicitly from the concept of the citizen to the concept of the self and how this is manifest in different ways in online life. In Chapter 14 Lynne Roberts and Malcolm Parks explore this theme through the interrogation of the phenomenon of gender-switching on the Internet. Having suggested that the primary barrier to gender-switching is the belief that it is dishonest and manipulative, they argue that their data reveals it to be considerably more benign and practised by only a minority of MOO users for a small percentage of their time online. This chapter concludes that gender switching within MOOs of all kinds might best be understood as an experimental behaviour, rather than as an expression of sexuality, personality or gender politics.

The female bodily form is also the subject of the chapter by Krissi Jimroglou, introducing us to 'JenniCAM', a cyborg subject confined to her bedroom and created through the integration of the electronic image and the Internet. This creation, argues Jimroglou, exposes more than just flesh. JenniCAM reveals cultural tensions surrounding epistemological conceptions of vision, gender and identity and questions the

role of technology in the representation and construction of gendered subjects. Using feminist film theory, she demonstrates how the construction and display of the female body via the digital camera transforms our readings of gendered bodies.

Elaine Graham's chapter explores the implications for feminist theory and praxis of a recovery of the goddess. Donna Haraway's 'cyborg writing' may have subverted many of the dualisms of western culture, but Graham warns of the dangers in rejecting the traditional gendered stereotypes associated with unreconstructed 'nature'. Drawing upon Luce Irigaray's work, she argues that some models of 'becoming divine' promise more radical configurations of the goddess, which offers an exciting addition to theories of cyberfeminism.

In beginning the exploration of these new themes which are crystallizing round the topic of gender and ICTs we are hopeful that this volume will spark more debate around the theme of gender and online life.

We would like to thank the regular members of the Equal Opportunities on Line: Gender and IT Economic and Social Research Council seminar series for their enthusiasm and excitement about the plans for the book. Many of them have become contributors during the process. Special thanks go to Flis Henwood, Gill Kirkup, Nina Wakeford and Barbara Cox (from CSPR at Teesside) for their support in organizing the seminar series that continues to be a 'creative ideas space' for exchange, networking and friendship. We are also grateful to Brian Loader, Editor of the Teesside-based journal, *Information, Communication and Society*, who was enthusiastic about us editing the special issue on which the book is based and encouraged us to enlarge it into an edited collection. Thanks also to Michelle Bacca and Edwina Welham at Routledge for their patience and support during the production process.

Last, but not least, we would like to acknowledge the support of our respective families. Ian and Craig put up with us 'disappearing for an hour' – which turned into three – mostly with patience and good humour. Thanks also to Sam, Zoë, Nicol and Sibyl who uncomplainingly put up with us on the numerous occasions when the writing overflowed into time reserved for them.

Eileen Green (e.e.green@tees.ac.uk) and Alison Adam (a.adam@salford.ac.uk)



## Reference

- Green, E. and Adam, A. (1998) 'On-line leisure: gender and ICTs in the home', *Information, Communication and Society*, 1 (3): 291–312.